



Insulate Basement Walls in Conditioned Space

Job Aid for Air Seal and Insulate Walls of a Conditioned Subspace (Basement or Crawl Space) Badge

Aligns With Standard Work Specifications 4.0402.4, 4.0402.5

BEFORE



An uninsulated wall in a "conditioned" space allows little resistance to heat transfer.



Check the foundation wall for penetrations and air seal as needed prior to installing insulation.



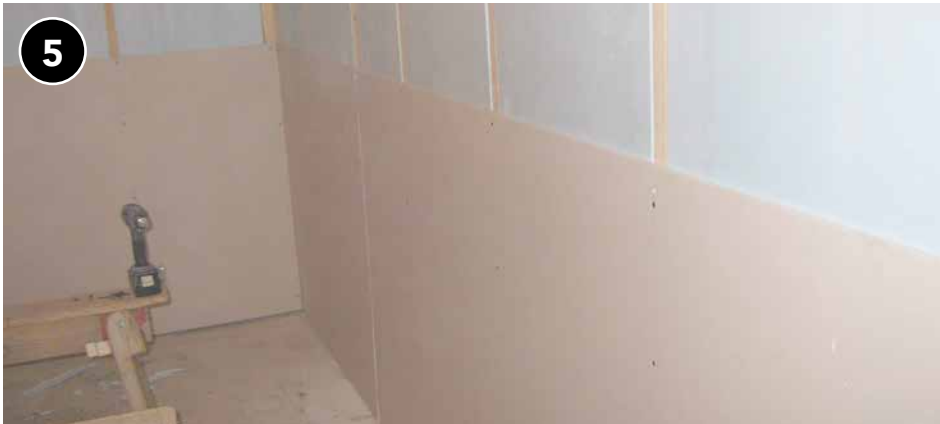
Check wall for water intrusion that needs to be mitigated first. All bulk sources of moisture should be directed away from the foundation walls.



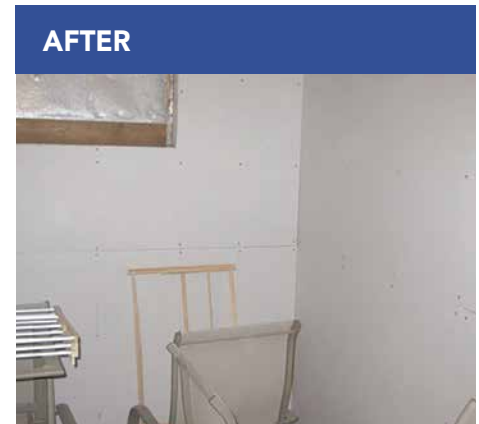
If insulation has vapor retarder on only one side, install the facing towards the conditioned space.



Install insulation using mechanical fasteners to prescribed R-value in full contact with the entire perimeter of the foundation wall from ceiling to floor.



Install a sealed air barrier on the conditioned side of the insulation. When using foam, gypsum board must be at least 1/2 inch to meet building code requirements as a thermal barrier.



A sealed continuous air barrier finishes off an insulated basement wall, providing air sealing benefits and improved thermal comfort while reducing heat transfer of the wall assembly.



Checklist

Air seal and insulate walls of a conditioned subspace (basement or crawl space)

DESIRED OUTCOME

Subspace is air sealed and insulated to achieve best thermal performance possible while preventing moisture condensation on the inside of band joists or other wall cavities.¹

Air sealing:

- ☐ Rim joist, sill plate, and adjacent surfaces and any walls to be treated were sufficiently cleaned and free of debris to allow for the proper adhesion of any caulks, adhesives, or spray foam used during installation.
- ☐ All penetrations greater than ¼" filled with backing, steel wool, or other pest-proof material before air sealing.
- ☐ Air sealing forms a continuous air barrier on the warm side of the thermal boundary, including floor-to-wall and wall-to-ceiling connections.

Insulation:

- ☐ On walls (basements² or crawl spaces), attach insulation with a durable connector equal to or better than manufacturer specifications.
- ☐ On rim joists, install foam-based or vinyl-faced fiberglass batt insulation tightly to the cavity and seal at all edges.
- ☐ Use fire-rated material if the insulation is to be left exposed.
- ☐ Ensure that the insulation has no gaps, voids, compression, or misalignment.
- ☐ Fill out applicable sections of the house-wide insulation certificate with coverage area, thickness, and R-value.

1. Relevant Standards: 4.0402.4, 4.0402.5

2. Where termite pressure exists, a 3-inch inspection gap will be maintained from the top of the insulation to the bottom of any wood to allow for termite detection. This varies by region and should be incorporated into the badge inspection criteria where applicable.

